

**Montana Department  
of  
Fish, Wildlife & Parks**



1420 E. Sixth Avenue  
Helena, MT 59620-0701

July 8, 1994

TO: Environmental Quality Council, Capitol Building, Room 106, POB 201704, Helena, MT 59620-1704  
Dept. of Fish, Wildlife & Parks  
Resource Assessment, Helena  
Fisheries Division, Helena & Region 3, Bozeman  
Region 3 Information Officer, Bozeman  
Montana State Library, 1515 E. Sixth Ave., POB 201800, Helena, MT 59620-1800  
Jim Jensen, Montana Environmental Information Center, POB 1184, Helena, MT 59624  
Janet Ellis, Montana Audubon Council, POB 595, Helena, MT 59624  
George Ochenski, Government Affairs & Consulting, P.O. Box 689, Helena, MT 59624  
U.S. Forest Service, Gardiner Ranger District, P.O. Box 5, Gardiner, MT 59030  
Lorents Grosfield, HC87 Box 2145, Big Timber, MT 59011

Ladies and Gentlemen:

An Environmental Assessment (EA) has been prepared for the proposed Cedar Creek Water Leasing project. Water leasing is authorized by Montana's water leasing statute (85-2-436, MCA), which was enacted by the 1989 Montana Legislature as HB 707.

A water lease on Cedar Creek will improve instream flows for the benefit of Yellowstone cutthroat trout that annually enter Cedar Creek to spawn. The dewatering of Cedar Creek and other Yellowstone spawning tributaries during the irrigation season adversely affects the reproductive success of Yellowstone cutthroat trout. Tributary dewatering limits the production of the young cutthroats that are needed to replenish the Yellowstone's fishery.

An EA checklist is included with this document. Certain items on the checklist are more fully explained, as required, in the document.

This document is available for review at the Department's Regional Office in Bozeman, Helena Headquarters, State Library and the Environmental Quality Council. Any questions or comments should be directed to the undersigned by August 5, 1994.

Sincerely,

*Liter E. Spence (FAR)*

Liter E. Spence  
Water Resources Supervisor  
Fisheries Division  
(406) 444-3888

STATE DOCUMENTS COLLECTION

SEP 30 1994

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1515 E. 6th AVE.  
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Attachments

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Environmental assessment, Cedar Creek Wa



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Montana Department of Fish, Wildlife & Parks  
Fisheries Division  
Environmental Assessment

Cedar Creek Water Leasing Project

General Purpose:

Montana's water leasing statute (85-2-436 MCA) was enacted by the 1989 Legislature as HB 707. The issue arose primarily as a result of the 1988 drought's impact on stream fisheries. The purpose of the legislation is to study the feasibility of leasing existing water rights to enhance stream flows for fisheries. It is a pilot program that terminates in 1999 and allows the Department of Fish, Wildlife and Parks to lease water rights from willing individuals who have traditionally used the water for diversionary consumptive purposes. Cedar Creek has been selected as a stream where increased flows would improve the reproductive habitat for Yellowstone cutthroat trout, a "Species of Special Concern" in Montana.

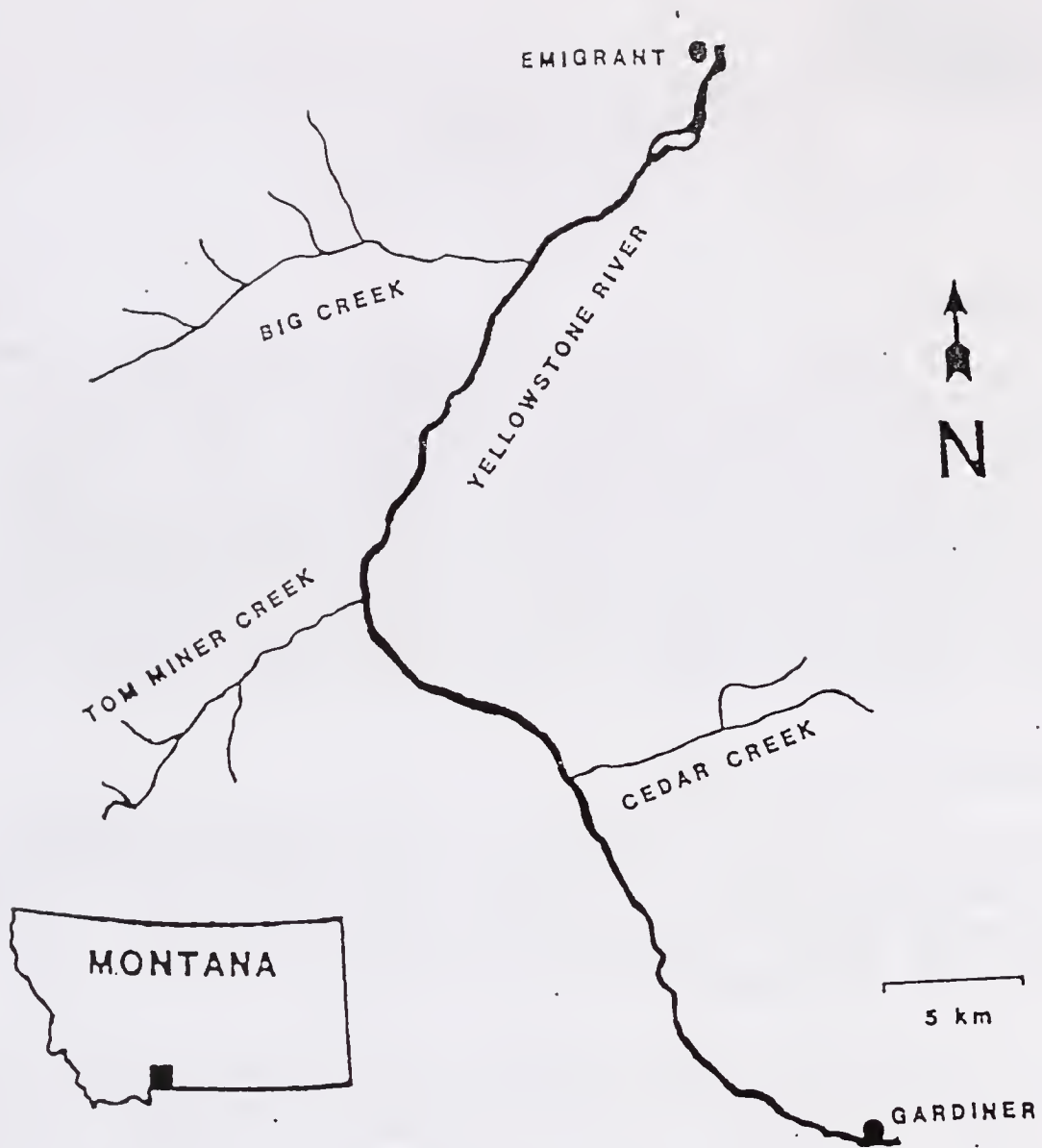
I. Location of the Project:

Cedar Creek, a 7.9-mile-long-tributary to the upper Yellowstone River, is located in Park County about 11 miles north of Gardiner, Montana (see attached map). It arises in the high peaks of the Absaroka-Beartooth Wilderness and flows westerly through a narrow mountain valley before discharging into the Yellowstone River. Cedar Creek drains an area of 21.3 square miles.

In 1989, the Rocky Mountain Elk Foundation purchased the 3,800 acre OTO Ranch, which abuts lands of the Gallatin National Forest and surrounds the mid-reaches of Cedar Creek. The ranch provides key winter range for migrant elk from Yellowstone National Park. Ownership of the property was transferred to the U.S. Forest Service in 1991. Ten water rights - four on Cedar Creek and six on First, Second and Spring creeks, tributaries to Cedar Creek - were acquired with the property. These ten rights include the second, third, fifth and seventh oldest rights in the Cedar Creek drainage.

II. Need for the Project:

The upper Yellowstone River, a highly valued sport fishery, supports brown, rainbow and Yellowstone cutthroat trout. Several small tributaries to the Yellowstone River are the only documented spawning sites for the river population of Yellowstone cutthroat trout, a fish classified as a "Species of Special Concern" in Montana due to its shrinking distribution and declining numbers. Dewatering of the lower segments of these tributaries during the irrigation season adversely affects the reproductive success of Yellowstone cutthroat trout and, consequently, limits the



Map of the Upper Yellowstone River drainage showing Cedar Creek.

production of new recruits for the river fishery. Studies by MDFWP and others show tributary dewatering to be an important, if not the major, factor regulating numbers of adult cutthroat in the Yellowstone River.

Cedar Creek is one of the better cutthroat spawning tributaries to the Yellowstone River. However, a series of four private irrigation diversions at about stream mile 0.5 of Cedar Creek presently take much of the flow during the summer irrigation season, thus limiting the capacity of Cedar Creek to produce cutthroat trout recruits for the sport fishery of the Yellowstone River. Leakage at the lower-most diversion provides a minimum flow of about  $\frac{1}{2}$  cfs in the lower channel where cutthroat spawn in early summer. Cutthroat eggs incubate in the spawning gravel for about 30 days before emerging as fry. Fry begin to out-migrate to the Yellowstone River shortly after emerging. By the end of August, most fry have entered the main river. Some fry remain in Cedar Creek through the winter. Cedar Creek produced an estimated 2,000 fry in 1988, a drought year. In 1989, estimated fry production was seven times greater than in 1988. A greater number of spawning sites were found in 1989, and a smaller portion of these became dewatered. Current fry production in Cedar Creek is relatively high when compared to other spawning tributaries to the Yellowstone River and could be improved with a small increase in flow.

### III. Scope of the Project

MDFWP will lease seven of the ten OTO water rights to enhance spawning flows in Cedar Creek for Yellowstone cutthroat trout. Once the leased water reaches the four downstream irrigation diversions, MDFWP will protect only 1.3 cfs to the creek's mouth. A flow of 1.3 cfs is the minimum that is needed to prevent fry losses caused by the dewatering of cutthroat spawning sites.

Although DFWP and the USFS have reached an agreement on this water lease, the lease cannot be implemented until a Change in Appropriation Water Right application is approved by DNRC. Any water users who feel they would be affected by this water lease have an opportunity to object to this "Change". The lease cannot be implemented until all objections have been resolved if, in fact, objections are received. The ten year lease period will begin on the date the "Change" is approved by DNRC.

### IV. Environmental Impact Checklist

See the attached checklist.

### V. Explanation of Minor Impacts to the Physical Environment

#### 1) Terrestrial and Aquatic Life and Habitat

There will be no adverse impacts to fish and wildlife from the proposed water lease. By improving flow of the stream during

the traditionally dewatered period of the irrigation season, fisheries and, to some extent wildlife, habitat will be improved. There will be no introduction of new species into the stream due to the leasing project. Water leasing in Cedar Creek will improve the spawning environment for Yellowstone cutthroat and thus increase overall populations in the Yellowstone River.

## 2) Water Quality, Quantity and Distribution

Water leasing will not result in any discharge to surface waters or any alterations of surface water quality. No changes in drainage patterns or the rate and amount of surface runoff due to natural causes will occur. However, there will be changes in the amount of surface water in the stream between the diversions at stream mile 0.5 and the creek's mouth. The amount of surface water will increase by a minimum of about 1.3 cfs during the irrigation season during most years. The quality of this water will remain the same as in the past. Because a smaller amount of Cedar Creek water will be diverted for irrigation, there could be a change in the return flow quantity or pattern. However, effects will probably be minor if any occur at all.

## 4) Vegetation cover, quantity and quality

Existing vegetation along the dewatered portion of the stream will not be adversely affected by the water leasing project. On the contrary, the stream riparian area may benefit because some additional vegetative growth may occur because the stream will contain more water during the irrigation season in reaches formerly dewatered.

## 5) Aesthetics

Because a dry stream bed, or one containing little flow, is generally considered to be less aesthetic than a stream containing flowing water, water leasing should improve the aesthetics of the lower end of Cedar Creek. This portion of the stream is visible to travelers utilizing Highway 89. The additional flowing water during the irrigation season will be more aesthetically pleasing to travelers viewing the stream.

## 7. Unique, endangered, fragile or limited environmental resources

The Yellowstone cutthroat trout is a "Species of Special Concern" in Montana. Yellowstone cutthroats presently occupy no more than eight percent of their historic Montana range. Providing additional water in lower Cedar Creek through leasing will increase spawning potential for Yellowstone

cutthroat trout, thus improving the supply of young recruits to the Yellowstone River.

8) Demands on environmental resources

The intent of the water leasing program is to improve flows in streams traditionally dewatered for other uses. This project will improve the flows in the lower reach of Cedar Creek which will benefit the Yellowstone cutthroat population of the Yellowstone River. In the long-term, it could lead to additional fishing opportunities on the Yellowstone River due to increased numbers of cutthroat trout.

VI. Explanation of minor impacts to the human environment

4) Agricultural or industrial production

Under the lease agreement, water that was formerly used to irrigate approximately 200 acres of hay meadows on the OTO Ranch will now enhance instream flows in Cedar Creek. When the USFS acquired the property, the original intent was to continue to irrigate the hay meadows to improve the forage supply for wintering elk and mule deer. Subsequent evaluation concluded that the decreased forage production (without irrigation) would not, in the long-term, have a significant effect on the overall quality of the winter range in the Gardiner area.

VII. Discussion and evaluation of reasonable alternatives

1) The "no action" alternative.

If water is not leased on Cedar Creek, the following are likely to occur:

- The reach of Cedar Creek that leasing will benefit will continue to be dewatered,
- The spawning habitat in the dewatered reach will continue to be only a portion of its potential,
- Egg and fry losses resulting from dewatering will continue,
- Improving the spawning potential for Yellowstone cutthroat trout from the Yellowstone River will not occur,
- Cedar Creek's capacity to produce greater numbers of young cutthroat for the "recruitment limited" Yellowstone River will not be fully utilized.

2) The Proposed Alternative

Water leasing in Cedar Creek is an effort to improve flows in a stream that has traditionally been severely dewatered by the diversion of water for agricultural use. A proposed lease agreement will provide a minimum of 1.3 cfs of flow in the

dewatered stream reach during the irrigation season.

### 3) Alternatives considered but not recommended

Other means for increasing instream flows in Cedar Creek are not feasible in the near term. At this time, water leasing is the most viable option for the following reasons:

- There are no existing storage projects on Cedar Creek and, to our knowledge, none are planned for the immediate future,
- Montana law prevents the purchase of water rights for instream flows,
- There are no transbasin diversions planned which would allow flow augmentation in Cedar Creek,
- To our knowledge, there are no individual or group water conservation projects planned in the near term which would create additional water that might remain in, or be leased for, instream flows in Cedar Creek.

## VIII. Environmental Assessment Conclusion

### 1. Is an EIS required?

No. This review has clearly demonstrated that the impacts associated with this project are insignificant. The net result of the proposed work is a positive improvement to the human and physical environment.

### 2. Public comment

This is not a significant action. Therefore, this EA was not advertised for public comment. Limited opposition to leasing was expressed by some water users on Cedar Creek during a public meeting held by DFWP in Gardiner on December 18, 1991 and on December 14, 1993 when the lease was approved by the Fish, Wildlife and Parks' Commission during their monthly meeting. Objectors to leasing will have an opportunity to present their case when the application to Change Appropriation Water Right is noticed by the Dept. of Natural Resources and Conservation (DNRC).

### 3. Public Notice

Before this water lease can be implemented, it must be approved by the DNRC. DFWP has submitted to DNRC an Application to Change Appropriation Water Right, which will be publicly noticed in local newspapers. Any objections to the change must be resolved before the lease is approved. The change will be denied by DNRC if the lease is found to adversely affect the water rights of other users on Cedar Creek.

4. Name, title, address & phone number of person responsible  
for preparing the EA

Fred Nelson  
Fishery Biologist  
Fisheries Division  
Department of Fish, Wildlife & Parks  
1400 So. 19th Ave.  
Bozeman, MT 59715  
(406) 994-6937

drg  
Attachments - 3

DEPARTMENT OF FISH, WILDLIFE AND PARKS  
1420 E 6th Ave, PO Box 200701 Helena, MT 59620-0701  
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Cedar Creek Water Lease

Division/Bureau Fisheries

Program Water Leasing Study and Pilot Project

Description of Project DFWP proposes to lease seven existing irrigation water rights to enhance instream flows in Cedar Creek, a tributary to the Yellowstone River in Park County. Leasing will improve spawning habitat for migratory cutthroat trout from the Yellowstone River.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture				X		
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy			X			X
9. Historical & archaeological sites				X		See SHPO ltr attached

# POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities				X		
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction None

Individuals or groups contributing to this EA State Historic Preservation Office

Recommendation concerning preparation of EIS EIS not required.

EA prepared by : Fred Nelson

Date: June, 1994



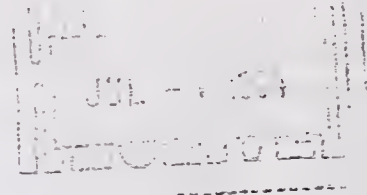
# State Historic Preservation Office

Montana Historical Society

1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715

July 1, 1994

Fred Nelson  
MDFWP  
1400 South 19th  
Bozeman, MT 59715



RE: Water Leasing Project - Cedar Creek; impacts on cultural resources

Dear Mr. Nelson:

Thank you for consulting us regarding the above referenced project. Given the nature of the project, we concur with your judgement that it has little or no potential to adversely impact cultural resources.

Sincerely,

Leanne Kurtz  
Historian/Cultural Records Manager

FILE: MDFWP/1994